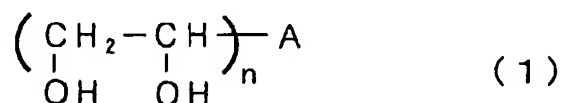


CLAIMS

1. A copper electrolytic solution containing as an additive a compound having a specific skeleton represented by General Formula (1) below, which is obtained by an addition reaction in which water is added to a compound having in a molecule at least one epoxy group:

[Chemical Formula 1]

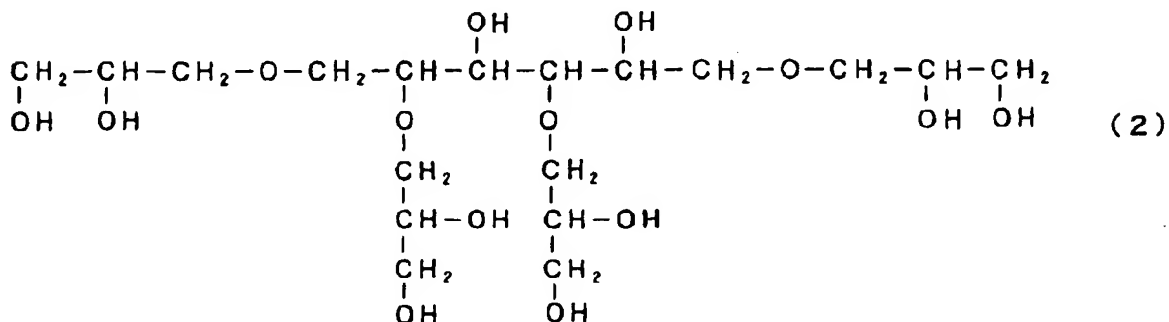


wherein A is an epoxy compound residue and n is an integer 1 or more.

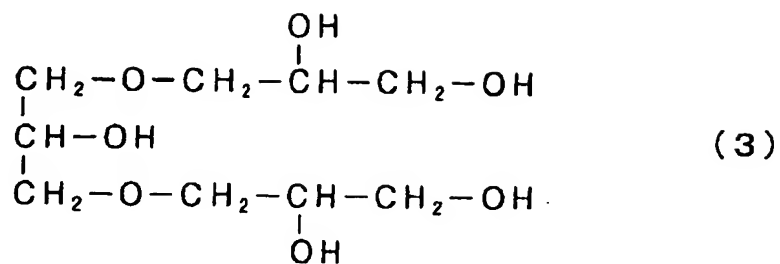
2. The copper electrolytic solution according to Claim 1, wherein the epoxy compound residue A of said compound having the specific skeleton has a linear ether bond.

3. The copper electrolytic solution according to Claim 1 or 2, wherein said compound having a specific skeleton includes any of compounds represented by chemical formulae (2) through (9) below.

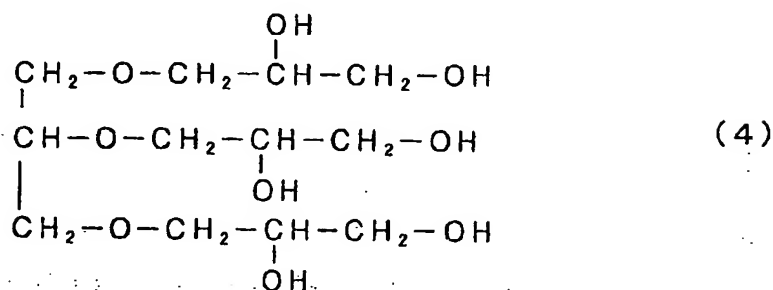
[Chemical Formula 2]



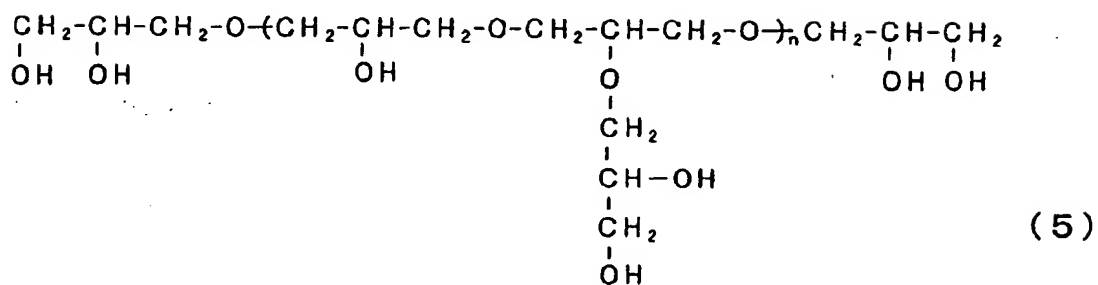
[Chemical Formula 3]



[Chemical Formula 4]

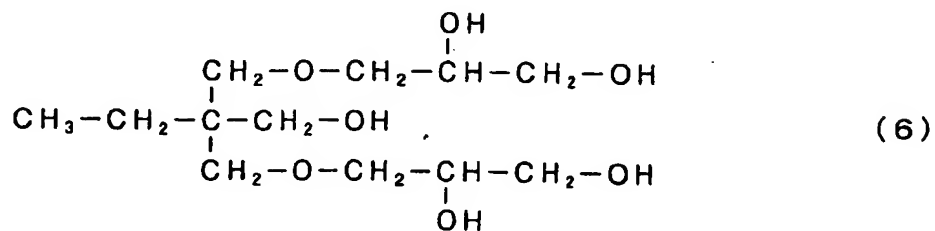


[Chemical Formula 5]

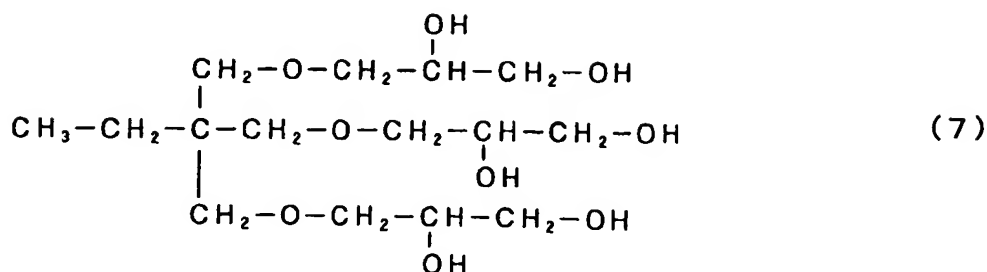


wherein n is an integer of 1 to 5.

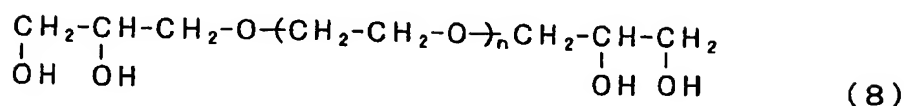
[Chemical Formula 6]



[Chemical Formula 7]

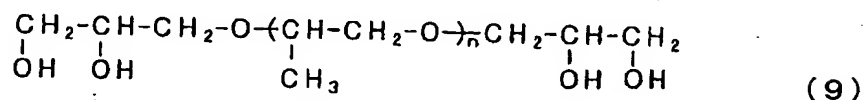


[Chemical Formula 8]



wherein n is an integer of 1 to 22.

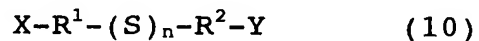
[Chemical Formula 9]



wherein n is an integer of 1 to 3.

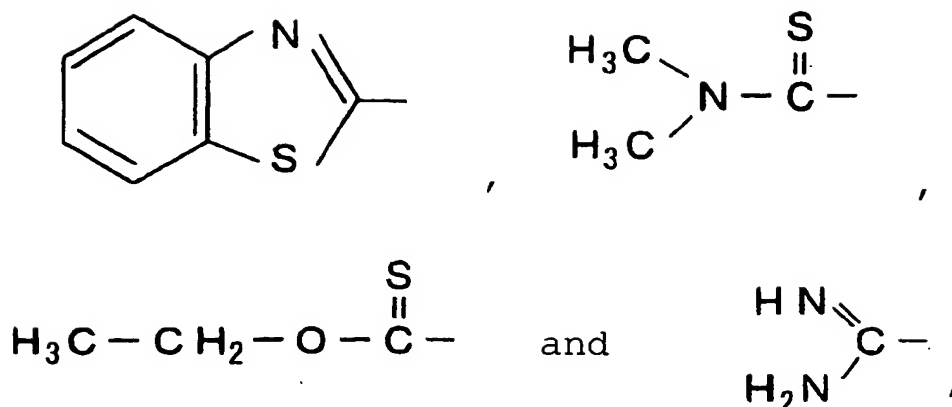
4. A copper electrolytic solution according to any one of Claims 1 through 3, wherein said copper electrolytic solution contains an organic sulfur compound.

5. The copper electrolytic solution according to Claim 4, wherein said organic sulfur compound is a compound represented by General Formula (10) or (11) below:



wherein in formulae (10) and (11), R¹, R² and R³ are alkylene groups with 1 through 8 carbon atoms, R⁴ is selected from the group consisting of hydrogen and

[Chemical Formula 10]



X is selected from the group consisting of hydrogen, a sulfonic acid group, a phosphonic acid group, and an alkali metal salt group or ammonium salt group of sulfonic acid or phosphonic acid, Y is selected from the group consisting of a sulfonic acid group, a phosphonic acid group, and an alkali metal salt group of sulfonic acid or phosphonic acid, Z indicates hydrogen or an alkali metal, and n is 2 or 3.

6. An electrolytic copper foil manufactured using the copper electrolytic solution according to any one of Claims 1 through 5.

7. A copper clad laminate formed using the electrolytic copper foil according to Claim 6.

8. A printed wiring board manufactured using the copper electrolytic solution according to any one of Claims 1 through 5.

9. A printed wiring board wherein the printed wiring board according to Claim 8 is a 2-layer flexible substrate.